

CLAIMS

What is claimed is:

1. A drilling rig capable of being used offshore comprising:
 - a. a cantilever, which is mounted for offshore use so as to be moveable in a first direction and a second direction with the cantilever projecting outside the drilling rig;
 - b. a multi purpose tower is fixedly attached to the cantilever, wherein the multi purpose tower comprises a mast disposed on a top side of the multi purpose tower provided with cable blocks fixedly connected to the mast and a gripper provided on a bottom side of the multi purpose tower, a trolley movably fixed on the mast, a hoist, a hoisting cable attached to the hoist and a winch, the hoisting cable being guided over the cable blocks, and wherein the trolley is moveable relative to the mast with the aid of the hoist; and
 - c. at least two friction reducing devices attached to a supporting cart, which are slidable with the supporting cart relative to the drilling rig and relative to the cantilever.
2. The drilling rig of claim 1, wherein the cantilever is slidable over the top side on at least two plates.
3. The drilling rig of claim 2, wherein the supporting cart further comprises at least two cylinders mounted thereto for moving the cantilever over the drilling rig.
4. The drilling rig of claim 3, wherein the at least two cylinders are hydraulic.
5. The drilling rig of claim 2, wherein the at least two plates are secured to the supporting cart.
6. The drilling rig of claim 5, wherein the at least two plates comprise a material different from the supporting cart and the drilling rig.

7. The drilling rig of claim 1, wherein the multi purpose tower is non-removably secured to the cantilever.
8. The drilling rig of claim 1, wherein the drilling rig is selected from the group consisting of a Compliant Tower, a Deep Draft Caisson vessel (SPAR), a Tension Leg Platform,
5 Temporary Tension Leg Platform, a Semi Submersible rig, and Mono Hull Ship.
9. The drilling rig of claim 1, wherein the at least two friction reducing devices comprise hydrostatic bearings.
10. The drilling rig of claim 1 further comprising two push pull units mounted on the supporting cart for moving the cantilever on the drilling rig.
- 10 11. The drilling rig of claim 1, wherein the cantilever and multi purpose tower are of one-piece construction.
12. The drilling rig of claim 1, wherein at least a first setback and a second setback are placed beside the multi purpose tower and at least a first piperacker and a second piperacker are placed beside the multi purpose tower.
- 15 13. A drilling rig capable of being used offshore comprising:
 - a. a drilling rig comprising a central axis and a cantilever, which is mounted on a rotating ring adapted to rotate in multiple directions on the drilling rig;
 - b. a multi purpose tower fixably mounted on the cantilever, wherein the rotating ring enables the multi purpose tower to be rotated approximately 90 degrees relative to
20 the central axis on the drilling rig, wherein the multi purpose tower comprises a mast disposed on a top side of the multi purpose tower provided with cable blocks fixedly connected to the mast and a gripper provided on a bottom side of the multi purpose tower, a trolley movably fixed on the mast, a hoist, a hoisting cable attached to the hoist and a winch, the hoisting cable being guided over the cable
25 blocks, and wherein the trolley is moveable relative to the mast with the aid of the hoist; and

c. at least two friction reducing devices secured to a supporting cart, which are slidable with the supporting cart relative to the drilling rig and relative to the cantilever.

14. The drilling rig of claim 13, wherein the friction reducing devices comprise at least two plates.

15. The drilling rig of claim 13, wherein the cantilever further comprises at least two cylinders mounted thereto for moving the cantilever over the drilling rig.

16. The drilling rig of claim 15, wherein the cylinders are hydraulic.

17. The drilling rig of claim 13, wherein the multi purpose tower is non-removably secured to the cantilever.

18. The drilling rig of claim 13, wherein the cantilever is adapted to rotate more than about 360 degrees.

19. The drilling rig of claim 14, wherein the at least two plates comprise a material different from the supporting cart and the drilling rig.

20. The drilling rig of claim 13, wherein said friction reducing devices comprise hydrostatic bearings.

21. The drilling rig of claim 13 further comprising two push pull units mounted on the supporting cart for moving the cantilever on the drilling rig.

22. The drilling rig of claim 13, wherein the cantilever and multi purpose tower are of one-piece construction.

23. The drilling rig of claim 13, wherein the drilling rig is selected from the group consisting of a compliant tower, a deep draft caisson vessel (SPAR), a tension leg platform, temporary tension leg platform a semi-submersible rig and a Mono Hull Ship.

24. The drilling rig of claim 13, wherein at least a first setback and a second setback are placed beside the multi purpose tower and at least a first piperacker and a second piperacker are placed beside the multi purpose tower.

25. A method for installing drilling equipment on a sub-sea well and drilling the well comprising:

a. placing a drilling rig with drilling equipment, a cantilever and multi purpose tower near a sub-sea well comprising a wellhead, wherein the multi purpose tower comprises a mast disposed on a top side of the multi purpose tower provided with cable blocks fixedly connected to the mast and a gripper provided on a bottom side of the multi purpose tower, a trolley movably fixed on the mast, a hoist, a hoisting cable attached to the hoist and a winch, the hoisting cable being guided over the cable blocks, and wherein the trolley is moveable relative to the mast with the aid of the hoist;

b. orienting the cantilever above the wellhead using rotational and translational movement;

c. picking up drilling equipment from the drilling rig using the multi purpose tower;

d. placing the drilling equipment on the sub-sea well;

e. connecting the drilling equipment to the sub-sea well; and

f. drilling the well.

26. A method for decommissioning a sub-sea well comprising:

a. placing a drilling rig with drilling equipment, a cantilever and multi purpose tower near a sub-sea well comprising a wellhead, wherein the multi purpose tower comprises a mast disposed on a top side of the multi purpose tower provided with cable blocks fixedly connected to the mast and a gripper provided on a bottom side of the multi purpose tower, a trolley movably fixed on the mast, a hoist, a hoisting cable attached to the hoist and a winch, the hoisting cable being guided over the

cable blocks, and wherein the trolley is moveable relative to the mast with the aid of the hoist;

- b. orienting the cantilever above the wellhead using rotational and translational movement;
- c. disconnecting the drilling equipment from the sub-sea well;
- d. picking up the drilling equipment using the multi purpose tower; and
- e. placing the drilling equipment on the drilling rig.

27. A drilling rig capable of being used offshore comprising:

- a. a drilling rig comprising a deck, wherein the drilling rig is selected from the group consisting of a Compliant Tower, a Deep Draft Caisson Vessel (SPAR), a Tension Leg Platform, a Temporary Tension Leg Platform, a Semi Submersible rig and a Mono Hall Ship;
- b. a cantilever adapted to be moveable in a first direction and a second direction for offshore use;
- c. a multi purpose tower fixably attached to the cantilever;
- d. a supporting cart disposed between the cantilever and the deck;
- e. at least four friction reducing devices secured to the supporting cart.

28. The drilling rig of claim 27, wherein the friction reducing devices comprise plates.

29. The drilling rig of claim 28, wherein the plates comprise an aluminum bronze alloy.

30. The drilling rig of claim 28, wherein the friction reducing devices comprise a combination of plates comprising a material different from the cantilever and the drilling rig and hydrostatic bearings.

31. The drilling rig of claim 27 further comprising a blowout preventor (BOP), a shaker and a centrifuge.
32. The drilling rig of claim 27, wherein cantilever and multi purpose tower have an L-shape.